

## Discrete Applied Mathematics

Combinatorial Algorithms, Optimization and Computer Science

### Guide for Authors

#### General

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The journal welcomes the following types of contributions:

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- Review articles, providing a comprehensive review on a scientific topic
- Fast Communications: Short, self-contained articles on ongoing research, or reporting interesting possibly tentative ideas, or comments on previously published research.

#### To whom can I submit my manuscript?

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#### General Author Instructions

Each paper should be introduced by three to five keywords and a selfcontained abstract of no more than 100 words, not counting the formulas.

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References should be listed alphabetically, as in the following examples: books [1], articles in journals [2], papers in a contributed volume [3, 4], unpublished papers [5].

- [1] E. Borger, Computability, Complexity, Logic (North-Holland, Amsterdam, 1989).
- [2] D.E. Knuth, Theory and Practice, Theoret. Comput. Sci. 90 (1991) 1–15.
- [3] A.K. Lenstra and H.W. Lenstra, Jr., Algorithms in number theory, in: J. vanLeeuwen, ed., Handbook of Computer Science, Vol. A (Elsevier, Amsterdam, 1990) 673–715.
- [4] M. Li, Lower bounds by Kolmogorov complexity, in: Proc. ICALP '85, Lecture Notes in Computer Science, Vol. 194 (Springer, Berlin, 1985) 383–393.
- [5] A. Rajasekar, Semantics for logic programs, Ph.D. Thesis, Department of Computer Science, University of Maryland, 1989.

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Important Notice: please add one to five keywords to your article.

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- Each keyword (which can be a phrase of more than one word) should describe one single concept. Words like “and” or “of” should be avoided.
- Avoid very general keywords which become meaningless once in a keyword list, e.g. “action”, “computer”, “mathematics”. Check whether the keywords describe the outline of the article on the whole.
- Use natural language: for instance “automatic error recovery” rather than “error recovery, automatic”.
- Try to use nouns and adjectives as much as possible (i.e. use “automatic error recovery” rather than “recovering errors automatically”). Do not use nouns in the plural form.
- Use English rather than American spelling (regardless of the spelling used for the article itself).
- Avoid the use of abbreviations as much as possible, unless an abbreviation is so well-established that the full term is rarely used (e.g. use “laser” instead of “Light Amplification by Stimulated Emission of Radiation”, but use “computer aided design” instead of “CAD”).

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To submit their work, authors are requested:

- To mail three hard copies of the manuscript to Editorial Manager, RUTCOR, Rutgers University, P.O. Box 5062, New Brunswick, NJ 08903-5062, USA, mentioning “Mathematical Software Section” in their covering letter and
- To send the codes electronically to Professors S. Martello and P. Toth at [smartello@deis.unibo.it](mailto:smartello@deis.unibo.it)/[ptoth@deis.unibo.it](mailto:ptoth@deis.unibo.it)

Only source codes are considered. Accepted languages are FORTRAN and C. The codes must strictly conform to the ANSI 77 Standard FORTRAN and to the ANSI C Standard, respectively.

The codes must be clean, well documented and self contained. Use of machine-dependent constants and functions should be avoided or, when needed, clearly stated. Each code must contain a main subroutine or procedure which receives all the input data and yields all the output data as parameters. Such a routine must begin with a comments section providing:

- clear description of the domain of applicability
- meaning of each input and/or output parameter
- list of machine dependent constants and functions
- list of the routines composing the codes
- type of structure of all the parameters
- rules for the arrays dimensioning
- meaning of the main interval variables

Indentation is recommended for loops and if-then-else statements. The labels in each routine should be consecutive with constant step. Examples of well-structured codes can be found in Martello and Toth, “Knapsack Problems: Algorithms and Computer Implementations”, Wiley, 1990.

Each code must be accompanied by a driver program which:

- defines the input data for one or more sample instances through assignment or input statements (in the latter case, the contents of the input records must be explicitly listed)
- calls the main routine of the code
- prints out the results on a standard unit. (The comments section of the driver program must provide the expected output.)

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